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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,494	11/16/2000	Kazuyoshi Ichihara	P06939US00/L	6010

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ALEXANDRIA, VA 22314

EXAMINER

ZUCKER, PAUL A

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 02/25/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/700,494

Applicant(s)

ICHIHARA ET AL.

Examiner

Paul A. Zucker

Art Unit

1621

-- The MAILING DATE of this c mmunication appears on the cover sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

DETAILED ACTION

Current Status

1. This action is responsive to Applicants' amendment of 16 December 2002 in Paper No 16.
2. Receipt and entry of Applicants' amendment is acknowledged.
3. Claims 1-4 remain outstanding.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-4 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Baer (Fluoro Alcohols, Industrial and Engineering Chemistry, 51(7), July, 1959, pages 929-930) in view of Yonemitsu et al (US 3,678,107 07-1972).

The present invention, in brief, describes a process for producing the precursor fluoroalkyl alcohol with nitric acid while feeding oxygen into the system.

Baer teaches (Page 829, third column, last paragraph) that fluoro alcohols can be oxidized to the corresponding acids by nitric acid.

The difference between the instantly claimed invention and that taught by Baer is that the instant process uses oxygen to reduce the amounts of nitric acid required.

Yonemitsu however, teaches (Column 1, lines 55-59) the oxidation of ethylene glycol in the presence of nitric acid and molecular oxygen to produce oxalic acid.

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Yonemitsu teaches (Column 2, lines 50-59) that the process can be carried out as a continuous process with no substantial loss of nitric acid during the reaction. The reason is believed (Abstract) to be that nitrogen oxide gases generated in the process are oxidized to nitric acid by oxygen during the reaction. Yonemitsu further teaches (Column 3, lines 4-9) using a vanadium compound as an oxidation catalyst.

One would have been motivated to apply the oxidation process of Yonemitsu to any nitric acid oxidation of alcohols, including the oxidation of fluoro alcohols to the corresponding acids because Yonemitsu teaches (Column 1, lines 27-49) that use of oxygen eliminates need for use of a nitric acid regeneration system.

Examiner's Response to Applicants' Remarks with Regard to This Rejection

5. Applicants have presented several arguments to the rejection above. The Examiner responds to these below:
 - a. Applicants argue that the amendment more clearly differentiates the claims from the teaching of Yonemitsu. The Examiner disagrees and points out that Yonemitsu is not relied upon for teaching the substrate. Baer teaches oxidation of the instant fluoro alcohols by nitric acid.
 - b. Applicants argue that one would not conceive of oxidizing the difficult to oxidize fluoro alcohols using oxygen and a sub-stoichiometric amount of nitric acid but would instead use a large excess of nitric acid. The Examiner disagrees and points out that Yonemitsu teaches the reduction of the required amount of nitric acid in the oxidation of alcohols. In addition, Baer teaches

(Page 829, 2nd column, 4th full paragraph, 1st sentence) that the instant fluoro alcohols have reactivity similar to that of their hydrocarbon counterparts.

- c. Applicants further argue that Baer fails to teach feeding oxygen into the reaction in order to reduce the amount of nitric acid required. The Examiner agrees but points out that Baer is not relied upon for that purpose. Yonemitsu teaches that feature of the instant process.

Applicant's arguments filed 16 December 2002 have been fully considered but they are not persuasive for the reasons indicated above.

Conclusion

6. Claims 1-4 are pending. Claims 1-4 are finally rejected.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Zucker whose telephone number is 703-306-0512. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 703-308-4532. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4556 for regular communications and 703-308-4556 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.

Paul A. Zucker
Patent Examiner
Technology Center 1600

February 19, 2003


Johann Richter, Ph.D., Esq.
Supervisory Patent Examiner
Technology Center 1600